REMARKS

Claims 1-21 are pending. Claims 1, 2, 5-15, and 17-21 stand rejected, and claims 3, 4, and 16 are allowed. Claim 20, which was amended to independent form in response to the indication of allowability in the Office action mailed 06/04/2003, stands rejected on new grounds. The Applicant sincerely thanks the Examiner for the allowance of claims 3, 4 and 16.

Amendments to the Drawing Figures:

Replacement sheet 2/2 is enclosed with amendment figures. Fig. 4 is amended to include the designation "(PRIOR ART)", which conforms Fig. 4 to the BRIEF DESCRIPTION OF THE DRAWINGS on page 3, and to the Written Description on page 8, lines 3-4. Sheet 2/2 had both the uppermost and lowermost views labeled "Fig. 4", which was a typographical error in the formal drawings. The as-filed informal drawings correctly label the lowermost view as "Fig. 6". Replacement sheet 2/2 corrects the label for Fig. 6. These amendments do not add new matter.

A copy of the previously submitted sheet 1/1, which does not contain any amendments, is also enclosed for the Examiner's convenience.

Rejections under 35 U.S.C. § 103

Claims 1, 2, 5-15, and 17-21 stand rejected as being unpatentable over U.S. Patent No. 6,417,842 to Shattuck (hereinafter "Shattuck") in combination with U.S. Patent No. 6,469,693 to Chiang et al. (hereinafter "Chiang"). The Examiner states that Fig. 7 of Chiang shows a mouse button **20** attached to the housing at a fulcrum ("hinge") **30**, and acknowledges that this button assembly lacks the second cantilever beam as claimed by the Applicant. The Examiner further states that Shattuck teaches the addition of a second cantilever beam that is attached to an existing button assembly such as the one displayed in Chiang, and that the addition of Shattuck's invention resembles the claimed invention. The Applicant respectfully traverses the Examiner's position.

In order to support a rejection under 35 U.S.C. § 103 it is not sufficient that a combination of teachings "resembles" the claimed invention. The Examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art, which

requires at least that: (1) the claimed invention must be considered as a whole; (2) the references must be considered as a whole; and (3) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.

Claim 1 recites, among other elements, a second cantilevered beam being flexibly attached to a first cantilevered beam through a second fulcrum. As the Applicant teaches on page 5, line 18 of the *Written Description*, the second fulcrum can be implemented as a molded plastic flexible hinge, for example. Referring to Fig. 2, the second cantilevered beam **36** is seen flexibly attached to the first cantilevered beam **30** through the second fulcrum **32**. In other words, the term "through" means that the second fulcrum supports the second cantilevered beam, as would be understood by one of ordinary skill in the art, since the fulcrum supporting a cantilevered beam is at an end of the beam.

Referring to Fig. 9, Shattuck states that the linear trigger arm **340** is disposed within an attaching means **350**. Shattuck further states that a socket could be utilized to secure the trigger arm **340**, and that a swivel socket would provide a means of altering the angular disposition of the trigger arm. Thus the attaching means **350** of Shattuck is not a second fulcrum of a second cantilevered beam as recited in claim 1. Furthermore, Shattuck teaches away from the recited invention because attaching the linear trigger arm **340** to the mouse button through a second fulcrum would prohibit the desirable movement of the trigger arm as taught by Shattuck. Therefore, the Applicant believes claim 1 and all claims that depend from claim 1 are patentable.

Claim 2, which depends from claim 1, recites that the first fulcrum comprises a first flexible hinge and the second fulcrum comprises a second flexible hinge flexibly attaching the second cantilevered beam to the second end of the first cantilevered beam. Examples of flexible hinges are provided in Figs. 2 and 3 and the related *Written Description*. As taught on page 6, lines 4-22, the spring constants of the recited flexible hinges enable creating a selectable force profile along the external surface of the button assembly. The Examiner refers to Fig. 2 of Shattuck and the description on Col. 11, lines 2-8, which recite that the trigger arm is placed in a "swivel socket" or attached by a "hinge." The Applicant respectfully notes that the portion of the disclosure of Shattuck cited by the Examiner relates to Fig. 9, not to Fig. 2.

Referring to Fig. 2, Shattuck states that an L-shaped structure **30** is pivotably connected by a retention mechanism **60** allowing the L-shaped structure to swing about the retention mechanism. The retention mechanism **60** is not a flexible hinge that flexibly attaches the L-shaped structure because the retention mechanism does not allow the L-shaped structure to flex with respect to the mouse button, but merely rotate to different positions "so that a thumb, index finger, or any finger or member can accurately operate the control buttons." (Col. 10, lines 1-2)

Furthermore, the L-shaped structure is not attached to the second end of a first cantilevered beam by the retention mechanism of Fig. 2, and the trigger arm is not attached to the second end of a first cantilevered beam by the swivel socket of Fig. 9. The various embodiments illustrated in Shattuck show structures attached to or extending through the upper surface of the mouse button **20**. Therefore the Applicant believe claim 2 is further patentable for at least each of the reasons given above.

Regarding independent claim 5, the Examiner refers to Fig. 3 of Shattuck and notes that the arm can be oriented backwards so that the pressure point of the lever is closer to the distal end than the palm end. However, claim 5 recites, among other elements, a computer pointing input device comprising a switch button having a palm end and a distal end, the switch button being configured to actuate an electronic switch within the computer pointing input device upon application of sufficient force to the switch button by the user, the switch button being movably coupled to a housing so as to move about a fulcrum, the fulcrum being nearer to the distal end than to the palm end of the switch button. As taught on page 8, lines 12-13 of the *Written Description*, this enables a force profile that increases as one moves from the palm end to the distal end of the switch button. Fig. 3 of Shattuck does not disclose or suggest the recited switch button.

The Examiner states that the mouse button **20** of Shattuck is similar to the mouse button **20** of Chiang, which shows the fulcrum **30** nearer to the palm end, not the distal end. Merely rotating the arm backwards so that the pressure point of the lever is closer to the distal end does not alter the relationship of the fulcrum **30** to the housing of the mouse. If, in the alternative, the Examiner is saying that the affixing means **60**, which Shattuck states is glue or VELCRO, for example, is the recited fulcrum and the L-shaped structure (alt. "device") **30** is the switch button, then the Applicant believes this rejection

cannot stand because the switch button is not movably coupled to the housing so as to move about the fulcrum recited in claim 5. The Applicant further notes that affixing the L-shaped structure to the mouse button **20** with glue or VELCRO teaches away from the claimed invention because it appears that movement about the affixing means **60** is undesirable.

In either event, claim 5 is not disclosed or suggested by Shattuck. The Applicant also traverses the Examiner's apparent assertion that Fig. 3 of Shattuck could be flexibly hinged as shown in Fig. 9. First, the Applicant traverses that Fig. 9 shows a flexible hinge, as argued above in support of claim 1. Second, Figs. 3 and 9 of Shattuck show different embodiments. The Examiner is not free to read into the prior art a teaching that is not there. (see, *e.g.*, *Motorola Inc. v. Interdigital Technology Corp.*, 43 USPQ.2d 1482 (CAFC 1997), *i.e.* to redesign the embodiment shown in Fig. 3 of Shattuck in light of Fig. 9 and/or the Applicant's teachings. Furthermore, the interpretation of the disclosure of Shattuck urged by the Examiner would not operate or achieve the advantages of the present invention. The legal conclusion of obviousness must be supported by the facts. (*In re Piasecki*, 745 F.2d 1468. 223 USPQ 785, 787-88 (Fed. Cir. 1984)). Therefore, a *prima facie* case of obviousness has not been established and claim 5 and all claims that depend from claim 5 are patentable.

Claim 9, which depends from claim 5, recites a spring beam having a first end and a second end, the spring beam being coupled to the switch button through the fulcrum at the first end and being coupled to the housing at the second end through a second fulcrum. In order to support the rejection of this claim, the Examiner must identify in the prior art each element recited in claim 9. Fig. 3 of Shattuck shows an arm attached to the mouse button with glue or VELCRO. Shattuck does not disclose the recited spring beam. A *prima facie* case of obviousness has not been established and therefore claim 9 is patentable.

Claim 6, which depends from claim 5, recites that a first force is required to be applied to the switch button to actuate the electronic switch at the distal end and a second force is required to be applied to the switch button to actuate the electronic switch at the palm end, the first force being greater than the second force. The Examiner rejects claim 6 because Shattuck discloses that the position of the lever is very important as it

dictates the amount of force required when the lever is placed away from the distal end. However, all words in a claim must be considered (*In re Miller*, 169 USPQ 597 (CCPA 1971)). Shattuck does not disclose the first and second forces recited in claim 6, and does not suggest any way to obtain the recited first and second forces. The Applicant believes that rejecting claim 6 merely because Shattuck recognizes that relationship between the operational force required and the position of the trigger arm is analogous to rejecting a species in light of a genus (ref. *In re Gosteli*, 872 F.2d 1008 (Fed. Cir. 1989)), which is improper. Therefore, the Applicant believes that claim 6 is further patentable, and that claim 10 is further patentable for similar reasons.

Regarding claims 7, 8, 11-14, 17, and 18, the Examiner states that there is not disclosed criticality in the specification as to why these numbers must be used in the mouse button assembly, and asserts that the specific numbers presented are merely design specifications that can be easily modified by one skilled in the art.

The criticality lies in the forces desired for operation by users having hands of different sizes, as discussed in relation to Table 2 of the disclosure. The Applicant respectfully directs the Examiner's attention to Table 1, which illustrates the force profile of a conventional mouse button. However, the prior art did not recognize the non-ergonomic force profiles of conventional computer input devices, and did not provide a solution to obtain the numbers in claims 1, 8, 11-14, 17, and 18. Before a variable can be optimized, it must be recognized as a result-effective variable. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). The recited variables were not so recognized. Similarly, the Examiner has not indicated what an artisan of ordinary skill could have modified to obtain the claimed numbers. If the Examiner is urging that one of ordinary skill would have known to modify the Applicant's device to obtain the recited numbers, the Applicant respectfully responds that the Applicant's own disclosure cannot be used in the rejection of his claims.

It is the Applicant who recognized and teaches the desirability of an increasing force profile, and also teaches apparatus and techniques for achieving an increasing force profile. The distance and forces recited in these claims are not merely for conventional operation of a mouse button, but enable a mouse that is easier to operate and more

ergonomic. The Applicant believes claims 7 and 8 are further patentable, and that claims 11-14, 17, and 18 are further patentable for similar reasons.

Claim 15 is patentable for at least one or more of the reasons given above in support of claims 1, 5, and 9. Furthermore, claim 15 recites that the plunger is configured to actuate the electronic switch (see, e.g. Fig. 2. ref. nums. 20', 12) Shattuck states that the nub would make contact with the mouse button (Col. 5, lines 5-7) to reduce the distance between the mouse button and the trigger arm or otherwise change the incident angle of contact. Thus the recited plunger is not disclosed or suggested by the cited art and claim 15 is patentable.

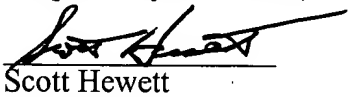
Claim 20 is patentable for at least one or more of the reasons given above in support of claims 1, 5, 9, and 15.

CONCLUSION

In view of the foregoing, the Applicant believes all claims pending in this Application are in condition for allowance. The Applicant respectfully requests reconsideration of all pending claims, the withdrawal of all rejections, and the issuance of a formal Notice of Allowance at an early date.

If the Examiner believes this amendment does not put all pending claims in condition for allowance, the undersigned invites the Examiner to telephone the undersigned at (707) 591-0789.

Respectfully submitted,



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